

c.p. Capsule of gland. *c.t.* Connective tissue. *d.f.* Dorsal fin. *d.s.* Dorsal spine. *ep.* Epidermis. *gl.* Poison-gland. *gr.* Groove in spine. *m.* Opercular muscles. *op.* Opercular bone. *op.m.* Opercular membrane. *op.s.* Opercular spine. *pg.* Pigment-layer of skin. *r.* Outer ridge of opercular spine. *sh.* Sheath of opercular spine. *x.* Region at which the cells of the epidermis are continuous with those of the gland. *y.* Space between the opercular spine and its sheath.

2. On a Collection of Coleoptera from Korea (Tribes Geodephaga, Lamellicornia, and Longicornia), made by Mr. J. H. Leech, F.Z.S. By H. W. BATES, F.R.S., F.Z.S., &c.

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During his recent entomological exploration of Japan and the neighbouring coasts of Eastern Asia, Mr. J. H. Leech paid a visit of six weeks' duration (May–June 1886) to the eastern side of the Korean peninsula, and was enabled, though his attention was chiefly occupied with Lepidoptera, to obtain a considerable collection of Coleopterous insects. His excursions were limited to the hilly country in the neighbourhood of Gensan, a district which appears never before to have been visited by an entomologist. Our knowledge of the products of Korea in this branch was previously confined to the western side of the country, where a small collection was made in 1883 and 1884 by Dr. C. Gottsche, and another, somewhat more extensive, a little later, by Herr Otto Henz. The former was catalogued and described by Herr Kolbe in Wiegmann's 'Archiv für Naturgesch.' in 1886; the latter by Ganglbauer in 'Horæ Soc. Entom. Rossicæ,' vol. xx. (1886), and by Von Heyden in the same periodical, vol. xxi. (1887). To the number of species thus recorded, viz. 286, Mr. Leech, in the three groups here catalogued, has added about 60, making a total of 346, which is, of course, but a small fraction of the Coleopterous fauna of the country. It is welcome, however, as affording us for the first time a glimpse of the nature of the fauna and of its relations to those of Japan and the regions of continental Asia to the north and south. So far as it goes it points to an essential unity of the Coleopterous fauna with those of the Amur and Northern China, and at the same time a decided difference between the faunas of Korea and Japan, in the same Order of Insects. The difference is twofold—it consists, first, in a large proportion¹ of continental Palæarctic genera and species being found in Korea but not in Japan; and, secondly, in the mixture of tropical forms, which is so well known a feature of temperate latitudes in Eastern Asia, being of a different nature in the two countries, for the proportion of these forms is decidedly less in Korea than in Japan, and consists of different genera as well as species.

¹ Of the 100 Korean species here catalogued, no fewer than 42 appear not to be found in Japan. Four of the 42 are tropical, not properly Palæarctic, forms.

This seems to show that the source and perhaps the epoch of immigration of tropical forms have been different for the two countries. It is, however, too soon to generalize with confidence on these points, seeing that we at present know scarcely a tenth of the species of Coleoptera almost certainly existing in Korea. I put forward these considerations, suggested by the examination of a large portion of Mr. Leech's acquisitions, chiefly to show that interesting problems lie before us in the fauna of this country, and that an attractive field lies open for future travellers and residents.

Fam. CICINDELIDÆ.

CICINDELA CHINENSIS, De Geer, Ins. 4, t. 17. f. 23.

Two examples, closely resembling the richly-coloured form prevalent in Japan.

CICINDELA GEMMATA, Faldermann, Mém. Acad. Petrop. ii. (1835), p. 14, t. 3. f. 1; Kolbe, Archiv f. Naturgesch. Berlin, 1886, p. 164, t. xi. f. 21.

Taken abundantly at Gensan, and found also by Dr. Gottsche between Söul and Fusan. On the Amur it reoccurs as a rather well-marked variety. Faldermann described it from Mongolian specimens taken by Bung more than half a century ago. To Herr Kolbe belongs the credit of resuscitating this species, which had been by most authors suppressed as a synonym of *C. sylvatica*, from which it is very distinct.

CICINDELA RADDEI, Morawitz, Bull. Acad. Petrop. iv. p. 188 (1862).

Three examples, agreeing well with the above-cited description.

CICINDELA JAPANENSIS, Chaudoir, Bull. Mosc. 1863, i. p. 202.

Many examples taken at Gensan. Common in Japan and on the Asiatic mainland as far south as the Yang-tsze.

Fam. CARABIDÆ.

CARABUS VAN-VOLXEMI, Putzeys, Ann. Soc. Ent. Belg. xviii. p. 2.

Gensan. One example only, differing from Japanese specimens in the fainter granulations of the interstices, and possibly indicating a distinct local variety.

CARABUS TUBERCULOSUS, Dejean, Sp. Gen. Col. v. p. 549.

Gensan, one example.

CARABUS BILBERGI, Mannerheim, Hummel's Ess. vi. p. 25.

One example, apparently an elongate variety of this species.

COPTOLABRUS SMARAGDINUS, Fischer, Ent. Russ. ii. p. 103.

Two examples of a rich uniform golden-coppery colour, the apex

of the elytra sharply bidentate. It agrees in colour with the var. *pyroclopus*, Kraatz, but seems to differ from it and from all other varieties of the species by the distinct but short and fine tooth or spine near the sutural apex of each elytron.

COPTOLABRUS LEECHI.

C. gehinii (Fairmaire) *quoad formam similis, sed valde differt elytris utrinque triseriatim breviter nigro-tuberculatis tuberculis-que (fere sicut in C. schrenckii, Motsch.) inter se annulo tenui ovato concatenatis. Long. 37 millim. ♀.*

Gensan; one female example.

This magnificent species in general form resembles a *Damaster*, with the exception that the elytra are more ovate and convex, and quite simple at the apex. The colour of the upper surface is rich golden coppery, more brilliant (owing to the sparser sculpture) on the head and thorax than on the elytra, which latter are very closely rugulose-punctate, or more properly coarsely shagreened, the three rows of rather short oblong tubercles, and a row of much smaller ones between each pair and along the suture, being shining black. The head, with the neck, is long and narrow, the labrum strongly sinuated in the middle, the mandibles much elongated, and the surface somewhat faintly punctulate and rugulose. The thorax is narrow, at the apex not wider than the neck, moderately rounded in the middle, and constricted before the base, the hind angles being produced, but obtuse at their apices; the surface is faintly and irregularly transverse rugulose. The underside is violet-black and smooth; the underside of the head and prothorax, sides of breast and abdomen, and the elytral epipleuræ coppery violet. The legs, antennæ, and palpi are black.

SCARITES SULCATUS, Olivier, Ent. iii. 36, p. 7, t. i. f. 11; Chaudoir, Monogr. Scaritides (1880), p. 80.

One example, taken at Gensan, of this well-known Indian species.

CHLÆNIUS COSTIGER, Chaudoir, Bull. Mosc. 1856, iii. p. 258.

Distributed throughout Eastern China, from north to south; Japan and Formosa.

CHLÆNIUS VIRGULIFER, Chaudoir, Monogr. des Chlœniens, p. 61.

Also found throughout Eastern China.

CHLÆNIUS NÆVIGER, Morawitz, Beitr. zur Käferfaun. Ins. Jesso, p. 33, t. i. f. 16.

North China and Japan.

CHLÆNIUS HOSPES, Morawitz, *l. c.* p. 32, t. i. f. 15.

North China and Japan.

ANISODACTYLUS SIGNATUS, Illiger, Käf. Preuss. i. 174.

Found throughout Europe and Siberia and in Japan. It appears to be a common insect at Gensan.

ANISODACTYLUS TRICUSPIDATUS, Morawitz, Beitr. Käferf. Ins. Jesso, p. 66.

Gensan, several examples. Also found in Japan.

HARPALUS GRISEUS, Panzer; Dej. Sp. Gen. Col. iv. p. 251.

A generally distributed species throughout Europe, Northern Asia, and Japan.

HARPALUS RUGICOLLIS, Motschulsky, Etud. Ent. 1860, p. 5.

Found also in Japan.

HARPALUS, sp. inc.

Gensan, one example. Species doubtful.

HARPALUS CHALCENTUS, Bates, Trans. Ent. Soc. 1873, p. 263.

North-eastern China to the Yang-tsze; Japan.

HARPALUS CRATES, Bates, Trans. Ent. Soc. 1883, p. 239, note.

One example. Found throughout Eastern China.

HARPALUS TARDUS, Panzer, Faun. Germ. Heft 37. f. 24.

A common Palearctic species, recorded as occurring throughout Europe and Asia as far east as Kulja.

Two examples, not distinguishable from European specimens.

CYRTONOTUS NITENS, Putzeys, Etud. s. les Amara, p. 234.

Gensan; apparently abundant. A widely distributed insect throughout Northern China and Japan.

BRADYTUS BREVIPENNIS, Chaudoir, Bull. Mosc. 1844, iii. p. 446.

Found also in Eastern Siberia.

TRIPLOGENIUS INGENS, Morawitz, Beitr. Käferf. Ins. Jesso, p. 54.

Throughout Northern China and Japan.

LAGARUS ABERRANS, Morawitz, Bull. Ac. St. Pétersb. 1863, p. 251.

Also recorded from the Amur and Japan.

LAGARUS SULCITARSIS, Morawitz, Bull. Ac. St. Pétersb. 1863, p. 250.

Found also in Manchuria and Japan.

LAGARUS NIMBATUS, Morawitz, Bull. Acad. St. Pétersb. 1863, p. 235.

Also Japan.

OMASEUS ROTUNDANGULUS, Morawitz, Bull. Ac. St. Pétersb. 1863, p. 252.

Also Japan and Eastern Siberia.

OMASEUS FORTIS, Morawitz, Bull. Ac. St. Pétersb. 1863, p. 252.

Also coast of Manchuria and Japan.

Gensan; three examples, agreeing with the Japanese form, but somewhat smaller in size.

DOLICHUS FLAVICORNIS, Fabr.

Taken in plenty at Gensan. A well-known South-European species, extending through Turkestan to Eastern Asia and Japan.

ANCHOMENUS (LIMODROMUS) MAGNUS, Bates, Trans. Ent. Soc. 1873, p. 278.

Found also throughout Eastern China to the Yang-tsze, and in Japan.

PHEROPSOPHUS JESSOENSIS, Morawitz, Bull. Ac. St. Pétersb. 1863, p. 322.

Gensan; many examples, closely resembling the Japanese form.

DRYPTA DENTATA, Rossi.

Gensan; a single example, differing from West-European and British specimens only in the slightly finer punctuation of the elytra and the stronger dorsal furrow of the thorax. I do not find the species mentioned in Von Heyden's Catalogue of the Coleoptera of Siberia (1881).

Fam. COPRIDÆ.

SCARABÆUS SACER, Linn., var. *PEREGRINUS*, Kolbe, Archiv f. Naturgeschichte, 1886, p. 184, t. xi. f. 26.

Mr. Leech obtained two examples of this insect, in this eastern extremity of its wide range. The Korean variety differs from the typical Mediterranean form chiefly in the dark-brown hair-fringes of the hind tibiæ. The species has not hitherto been found in Japan.

COPRIS OCHUS, Motschulsky, Etud. Entom. 1860, p. 13.

A common insect in Japan.

COPRIS TRIPARTITA, Waterhouse, Trans. Ent. Soc. 1875, p. 74.

Found also in Japan.

ONTHOPHAGUS RUGULOSUS, Von Heyden, Deutsch. ent. Zeits. 1886, p. 289.

Described from examples from the neighbourhood of Peking. Mr. Leech obtained a fair series of both sexes at Gensan.

ONTHOPHAGUS LENZII, Harold, Abhandl. nat. Ver. Bremen, iv. 1875, p. 290.

Also found in Japan.

ONTHOPHAGUS FODIENS, Waterhouse, Trans. Ent. Soc. 1875, p. 75.

Also a Japanese insect.

ONTHOPHAGUS SOLIVAGUS, Von Heyden, Deutsch. ent. Zeits. 1886, p. 290.

Von Heyden described the male only, from Peking. Mr. Leech's two examples, females, agree very well with the description, but they are smaller ($8\frac{1}{2}$ millim., Von Heyden gives 10 millim.); the head has two sharply raised and slightly arcuated carinæ; in the male the occiput has a short horn.

ONTHOPHAGUS — — ?

A single example; indeterminable.

ONITICELLUS PHANÆOIDES, Westwood, in Royle's Himalaya, Entom. p. 55, t. 9. f. 3.

The Korean differs from the Japanese form in the transverse posterior ridge of the thorax, in fully-developed males, being depressed and crossed by a groove. In this feature they approach the North-Indian type-form more nearly than does the Japanese variety, in which the elevation described is triangularly elevated in the middle.

Fam. APHODIIDÆ.

APHODIUS APICALIS, Harold, Berl. ent. Zeits. 1861, p. 96.

Found also, widely distributed, in Japan.

APHODIUS SORDIDUS, Fabr. Syst. Ent. i. p. 16.

A species distributed throughout the entire Palæartic region from Western Europe (including Britain) to Manchuria and North-eastern China, and extending to Japan, according to Waterhouse, in the variety *4-punctatus*. Korean examples do not differ from West-European specimens with which I have compared them.

APHODIUS UROSTIGMA, Harold, Berl. ent. Zeits. 1862, p. 170; id. Mittheil. Münch. 1880, p. 156.

Found also in Java, Ceylon, and Annam. From the last-named locality M. Fleutiaux has sent me a series of specimens under the name of *A. pallidicornis* (Walker), but they agree better with *A. urostigma* as defined by Von Harold. The pygidium is uncovered and clothed with hairs, a peculiarity not noticed by the describer.

Fam. MELOLONTHIDÆ.

HOPLIA RUFIPES, Motschulsky, in Schrenck's Reise, p. 133, t. 9. f. 4; Kraatz, Deutsch. ent. Zeits. 1879, p. 232.

A large series of examples taken at Gensan, nearly all obscure and uniform in the colour of the scales of the upper surface. The species occurs also on the Amur, and I have examples from the coast of Manchuria.

SERICA HERZI, V. Heyden, Hor. Soc. Ent. Rossicæ, xxi. (1887), p. 264.

Two examples taken at Fusan.

APOGONIA CUPREOVIRIDIS, Kolbe, Archiv f. Naturgesch. 1866, p. 193.

Gensan; four examples.

The species (if I have determined it aright) differs from *A. splendida* (Boh.) of Japan and China in the more arcuated outline of the clypeus, which describes the segment of a circle, not flattened as in *A. splendida*, and in the sides of the elytra at their widest part having only two instead of four smooth interstices.

LACHNOSTERNA DIOMPHALIA.

L. parallelæ (Motsch.) *affinis et simillima, sed differt pygidio ♂ valde convexo, ante apicem bicalloso. Long. 20 millim.*

Fusan; two examples, ♂.

Similar to the common Japanese and Chinese *L. parallela* (Motsch.); of similar elongate oblong form, shining black colour, and strong but separated punctuation of the head and thorax. The males, however, differ greatly: in *L. parallela* the pygidium is simply and moderately convex, and the apical ventral segment transversely convex; in *L. diomphalia* the pygidium is bigibbous a little before the apex, with a strong marginal groove, and the apical ventral segment is large and transversely tumid.

LACHNOSTERNA MOROSA, Waterhouse, Trans. Ent. Soc. 1875, p. 104.

Three examples, one black and two piceo-castaneous.

LACHNOSTERNA —?

A single example; undeterminable.

HOPLOSTERNUS JAPONICUS, Harold, Abhandl. nat. Ver. Bremen, iv. 1875, p. 291.

One example only, a ♀, having a longer sternal spine than Japanese specimens; but as the latter vary considerably in the length of the spine, it is open to doubt whether the Korean insect is specifically distinct.

Fam. RUTELIDÆ.

PHYLLOPERTHA CONSPURCATA, Harold, Deutsch. ent. Zeitschr. 1878, p. 71.

Taken abundantly at Gensan. Also found in Japan.

ANOMALA RUFOCUPREA, Motschulsky, Etud. Entom. 1860, p. 14; Harold, Deutsch. ent. Zeitsch. 1877, p. 350.

All the very numerous examples taken by Mr. Leech differ from Japanese specimens in the rather stronger and closer punctuation of the upper surface of the body, the punctures on the elytra tending to coalesce into transverse rugæ. The wide range of colour-variation is similar in both forms, viz. — 1 (typical and the least numerous), coppery red; 2, brassy-green in different shades; 3,

brassy-green with tawny-red elytra glossed with green; 4, coppery, with coppery-brown elytra; 5, violet-brown; and 6, nearly black.

ANOMALA SIEVERSI, V. Heyden, Horæ Soc. Ent. Rossicæ, xxi. (1887), p. 266.

Gensan and Fusan. Abundant also at Kiukiang on the Yang-tsze. A species resembling much in colour and pilosity the Japanese *Phyllopertha octocostata*, Burm., which, according to Von Heyden, was taken by Herz also in Korea.

ANOMALA TESTACEIPES, Motschulsky, Etud. Entom. 1860, p. 14; Harold, Deutsch. ent. Zeitsch. 1877, p. 356.

One example only, of brassy-testaceous colour, taken at Gensan; with elytral interstices much less opaque than in the Japanese form.

ANOMALA ORIENTALIS, Waterhouse, Trans. Ent. Soc. 1875, p. 108.

A good series of examples from Gensan, nearly all with unicolorous elytra, one only dark coppery brown; in other respects they do not differ from the Japanese form.

ANOMALA DUBIA, Ballion, Bull. Moscou, 1870, iv. p. 344.

I refer with some hesitation a species, of which Mr. Leech took several examples at Gensan, to the above. They agree with the very insufficient description, if we may suppose that it was drawn up from an immature example in which the elytra are "testaceis, æneomicantibus." The normal colour of the whole upper surface is rich metallic green, in some examples having a more æneous or golden-green tint. It is an oblong densely-sculptured species, and is closely allied to the Chinese *A. aulax* (Wiedm.), from which, in fact, it scarcely differs except in its smaller size (12-14 millim.), in the underside being wholly dark metallic, and in the absence of any traces of pale borders to the thorax and elytra.

ANOMALA (EUCHLORA?) MONGOLICA, Faldermann, Mém. Acad. Pétrap. ii. 1835, p. 379.

Many examples taken at Gensan. Found also in Mongolia, on the Amur, and in Japan. The species is placed by all later authors in the genus or subgenus *Euchlora*; but I can discover no single point of structure to distinguish it from the typical *Anomalæ* (*A. fritschii* and allies), with which it agrees in the angularly dilated lower branch of the larger anterior tarsal claw in the male—a character which separates the typical *Anomalæ* from *Euchlora viridis* and its immediate relatives.

ANOMALA (PARASPILOTA) IMPICTA.

Elongato-ovata, glabra, flavo-testacea, supra (maculis thoracis vagis fuscis exceptis) impicta antice auro-tincta, subtus corpore medio, pedibus antennisque plus minusve nigris; clypeo lato et brevi, antice late truncato medio subsinuato, marginibus alte

reflexis; capite toto disperse punctulato; thorace transverso, a basi usque ad apicem subrotundatim angustato disperse punctulato, lateribus vage multi-impresso, marginibus reflexis medio basi immarginato plano, angulis posticis valde obtusis; elytris punctato-striatis vix costatis, interstitio 2do lato confuse punctato; pygidio fere lævi; pectore breviter sparsim pubescenti. Spina sternalis gracilis, elongata, acuta. Unguis exteriorum tarsorum 4 anticorum sat gracilis, fissus, ♂ ♀. Antennarum clava utroque sexu elongata (in ♀ vix brevior).

♂. *Pygidium versus apicem convexum; segmentum ventrale apicale breve.*

♀. *Pygidium æqualiter modice convexum; segmentum ventrale apicale elongatum.*

Long. 14-17 millim.

Gensan; many examples.

Agrees with the section *Spilota* (*sensu* Dejean) in most of its characters, but peculiar in the form of its labrum, which is broader in the middle and pointed. This character may not prove of the importance it seems when the labrum in all the *Anomalæ* is more closely examined than it has hitherto been. Authors seem to have followed Erichson in giving it as inflexed and emarginated. Such species as I have dissected prove not to be emarginated, but to be rather produced and rounded in the middle of the anterior margin. The inflexion which commences nearly from the base is increased near the apex, giving the false appearance of emargination when viewed from above.

MIMELA SPLENDENS, Gyll. in Schönh. Syn. Ins. i. 3, App. p. 110; Burm. Handb. d. Ent. iv. 2, p. 506.

Mimela gaschkevitschi, Motschulsky, Etud. Ent. 1857, p. 32.

Mimela simplex, Bates, Proc. Zool. Soc. 1866, p. 345.

A common insect in Japan and Northern Formosa. Mr. Leech obtained many examples at Gensan.

MIMELA FUSANIA.

M. chinensi (Kirby) *proxime affinis; aureo- vel æneo-viridis apud latera testaceo-translucens, subtus (cum pedibus) testaceo-anea, fusco-cuprea vel læte cuprea, fere nuda; clypeo rugoso-punctulato, fronte et thorace disperse punctulatis hoc crebre minutissime punctulato, linea dorsali lateribusque vage impressis margine integro; elytris sat grosse passim punctatis, costis ordinariis distinctis lævibus interstitio 2do lato; pygidio sculpturis curvatis discretis medio læviore. Long. 14-15 millim.*

Fusan; many examples.

Exactly similar in form and sculpture to the form of *M. chinensis* (Kir.) met with abundantly on the Lower Yang-tsze Kiang; but differing constantly in its darker colour, the Chinese species being yellow-testaceous tinged with brassy. It cannot be *Mimela luteipennis*, Motsch., Peking, as that species is described as "abdomine testaceo-villoso"

POPILIA INDIGONACEA, Motschulsky, Etud. Entom. 1853, p. 47.

A few examples only were taken, at Gensan. Kolbe records it as found commonly by Dr. Gottsche on the western side of Korea. Originally described from examples taken near Peking. It is scarcely more than a local var. of *P. cyanea*, Hope.

POPILIA ATROCÆRULEA, n. sp.

P. indigonaceæ similis, sed convexior, elytris basi angustioribus pygidioque albo - bifusciculato. Cærulescenti-nigra, polita, thorace toto (disco posteriore subtilius) punctato; elytris utrinque prope basin haud profunde rugoso-foveatis, interstitio 2do basi confuse multipunctato et rugoso, versus apicem punctis multo paucioribus, deinde usque ad callum humeralem strüs punctulatis 4 mediocriter impressis; pygidio transversim (disco posteriore sparsius) punctulato-rugoso; processu sternali brevior et obtusior; corpore subtus nigro, nitido. Long. 11-13 millim.

Var. *Elytris utrinque macula magna triangulari (versus apicem plus minusve extensa) fulvo-castanea.*

Gensan and Fusan; a very large number of examples.

The white pubescent spots of the pygidium distinguish this species from *P. indigonacea* and *cyanea*, more conspicuously than the narrower base and more convex surface of the elytra. *P. cærulea* (Bohem.) of Hong Kong (recurring in Formosa in numerous colour-varieties) is a much smaller insect ($10\frac{1}{2}$ millim.), and distinguished by the very deep foveæ near the base of the elytra, the much deeper striæ, and the short and almost uniseriate puncture-row of the second interstice.

Of the variety there are several examples (from Fusan) in Mr. Leech's collection; others, with the castaneous spot clearer and larger, were taken by A. Adams, either in Korea or on the coast of Manchuria a little farther north.

Von Heyden records *P. adamas*, Newm., from Korea; but this is an Indian species, widely different from the above, having white pubescence, partly lying in a broad groove, on the sides of the thorax.

POPILIA BOGDANOWI, Ballion, Bull. Moscou, 1870, iv. p. 345.

A small species ($9-10\frac{1}{2}$ millim.), taken at Gensan; agrees very well with the above-cited description. It is closely allied and similar to the Javan *P. biguttata* (Wiedm.), and like that species destitute of foveæ near the base of the elytra.

ADORETUS TENUIMACULATUS, Waterhouse, Trans. Ent. Soc. 1875, p. 112.

Gensan. Common in Japan.

Fam. CETONIIDÆ.

GLYCYPHANA CUPREOLA, Kraatz, Deutsch. ent. Zeitschr. 1879, p. 243 et seq.

A series of examples from Gensan, differing little amongst themselves in form, colour, or sculpture, though considerably in pubescence,

agree very closely with two male examples from the Amur, which I identify with *G. viridiopaca* var. *cupreola* of Kraatz described from the same locality. They all differ, in both sexes, from *G. viridiopaca*, *G. bensoni*, and *G. pilifera* very strikingly in the shallow emargination of the thorax adjoining the scutellum. In colour they differ also from those species in being coppery with more or less of an æneous tinge, more or less subopaque above and brilliant beneath; the tarsi, and sometimes the tibiæ, dark brassy green. An example from Fusan differs from those above described in being dark coppery brown above and densely hairy, the hairs short and erect on the thorax, longer and looser on the elytra.

GLYCYPHANA PILIFERA, Motschulsky, Etud. Entom. 1860, p. 15.

Fusan. Common throughout Japan.

The single Fusan specimen resembles the Yezo form in the dark colour of the four anterior tarsi; in all specimens from the southern islands of Japan which I have examined the tarsi of all the legs are rich coppery like the under surface of the body.

GLYCYPHANA JUCUNDA, Faldermann, Mém. Acad. Pétrou. ii. p. 386.

The numerous examples are in a discoloured condition, and it is not possible to ascertain whether they belong to the North-China type-form or to the Japanese variety (*G. jucunda* var. *argyrosticta*).

GLYCYPHANA KUPERI, Schaum, Trans. Ent. Soc. (3 ser.) v. p. 69, t. 8. f. 6.

Gensan; two examples. Found also on the Lower Yang-tsze.

GLYCYPHANA FULVISTEMMA, Motschulsky, Schrenck's Reise, Ins. p. 135.

Gensan. Spread over Eastern Siberia, Northern China (to the Yang-tsze), and Japan.

CETONIA SEULENSIS, Kolbe, Archiv f. Naturgesch. 1886, p. 194, t. xi. f. 29.

Gensan; many examples of both sexes. The strong sinuation of the side of the thorax preceding a prominent hind angle, on which Herr Kolbe lays stress, is variable. I find scarcely anything, except the denser sculpture, to distinguish the species from *C. brevitarsis*, Lewis, and both so closely resemble the Europæo-Siberian *C. marmorata* that they can scarcely be considered more than slight geographical varieties of that species. The sides of the clypeus are, as in *C. marmorata*, scarcely elevated (not carinated as in *C. floricola*, Hbst., and its subspecies). The pygidium is extremely closely rugulose and not convex in either sex; the abdomen is longitudinally concave in the male.

CETONIA SUBMARMOREA, Burm. Handb. d. Ent. iii. p. 460.

Gensan; two examples. Common in Japan.

TRICHIUS SUCCINCTUS, Pallas, Ic. Ins. p. 18, t. A. f. 19; Burmeister, Handb. d. Ent. iii. p. 758.

A species of wide distribution in Eastern Siberia and extending to Japan.

Fam. PRIONIDÆ.

PRIONUS INSULARIS, Motschulsky, Etud. Entom. 1857, p. 36, 1861, p. 21.

A common species in North China and Japan.

ÆGOSOMA SINICUM, White, Cat. Long. Col. Brit. Mus. p. 30.

Also found in Japan and North China.

Fam. CERAMBYCIDÆ.

SPONDYLIS BUPRESTOIDES, Linn. Syst. Nat. xii. 2, p. 621.

A widely distributed and well-known Palæarctic insect, from Western Europe to North China and Japan.

ASEMUM PUNCTULATUM, Blessig, Hor. Soc. Ent. Ross. ix. p. 182.

Two examples from Gensan, closely agreeing with a specimen with which I have compared them from the Amur, whence Blessig obtained the species. It appears to be peculiar to this part of Asia, but, like the other species of the genus, it is scarcely more than a local variety of the European *A. striatum*.

CRIOCEPHALUS RUSTICUS, Linn. Syst. Nat. xii. 2, p. 634.

Has a range precisely similar to that of *Spondylis buprestoides*.

DISTENIA JAPONICA, Bates, Ann. Mag. Nat. Hist. (4) xii. p. 155.

Apheles gracilis, Blessig, *l. c.*

Extends to the Amur and Japan.

LEPTURA (PIDONIA) GIBBICOLLIS, Blessig, Hor. Soc. Ent. Ross. ix. p. 258.

Found also on the Amur and the coast of Manchuria.

LEPTURA SUCCEDANEA, Lewis, Ann. Mag. Nat. Hist. (5) iv. p. 464.

Found also in Japan.

LEPTURA CINCTA, Fab. Syst. El. ii. p. 356.

Ranges from Western Europe through Siberia to Korea, but apparently not extending to Japan.

LEPTURA ATRA, Fab. Syst. Ent. p. 197.

Range similar to that of *L. cincta*.

LEPTURA (STENURA) ARCUATA, Panzer, Faun. Germ. 8. 12.

Range same as the two preceding.

CALLICHROMA BUNGI, Falderm. Mém. Ac. Pétrop. 1835, ii. p. 433, t. 5. f. 5.

A species, in its typical form with red thorax, confined to Northern China, Mongolia, and countries to the north and east. It has not been recorded from Japan. In Southern China a local var., entirely black, is found.

POLYZONUS FASCIATUS, Fabr. Sp. Ins. i. p. 232.

Nearly the same range as the preceding.

CLYTUS CAPRA, Germar, Ins. Sp. Nov. p. 518.

Spread throughout the Palæarctic region from Western Europe through Siberia, but apparently not extending to Japan.

CLYTANTHUS PLEBEJUS, Fabr. Sp. Ins. i. p. 243.

Same range as the preceding.

Fam. LAMIIDÆ.

LAMIOMIMUS GOTTSCHER, Kolbe, Archiv f. Naturgesch. 1886, p. 224, t. xi. fig. 39.

A genus, so far as at present known, peculiar to Korea. Judging from the description *Lamia adelpha*, Ganglbauer (Hor. Soc. Ent. Ross. xx.), published about the same time as Kolbe's, is probably the female.

LAMIA TEXTOR, Linn. Syst. Nat. ed. x. p. 392.

Found from Western Europe through Siberia to the Pacific; but not yet recorded from Japan.

ANOPLOPHORA (MELANAUSTER) CHINENSIS, Forster, Nov. Spec. Ins. 1771, p. 39.

A common and well-known Chinese species, found also in Japan.

The genus *Melanauster* agrees with *Anoplophora* in all essential points of structure and the style of markings is fundamentally the same; the only difference is the distinctly-formed tubercular prominence on the mesosternum in *Melanauster*, which in *Anoplophora* exists only in a rudimentary state as a slight elevation.

MESOSA MYOPS, Dalm. in Schönh. Syn. Ins. i. 3, App. p. 168.

A widely distributed Palæarctic species, ranging from Finland through Siberia to the Pacific coast. It appears to be represented in Japan by *M. japonica* (Bates), and the single Korean example seems by its tawny yellow markings to be in some degree intermediate between the two.

MESOSA HIRSUTA, Bates, Journ. Linn. Soc., Zool. xviii. p. 244.

A very distinct species, known at present only from Japan and Korea.

MÆCHOTYPA FULIGINOSA, Kolbe, Archiv f. Naturgesch. 1886, p. 221, t. xi. f. 38.

A northern representative of a tropical genus common to the Indian and African regions. It is possibly the *Tylophorus wulfussii* of Blessig (Hor. Soc. Ent. Ross. ix. p. 245, t. vii. f. 3), but the description does not fit in essential points.

AGAPANTHIA AMURENSIS, Kraatz, Deutsch. ent. Zeitschr. 1876, p. 115.

Found also on the Amur.

SAPERDA GEBLERI, Falderm. Mém. Acad. Pétrap. ii. (1835) p. 434, t. 5. f. 6.

Northern China and Korea.

OBEREA VITTATA, Blessig, Hor. Soc. Ent. Ross. ix. p. 255.

Amur valley and Eastern Manchuria, according to Blessig. Mr. Leech met with male examples only at Gensan.

OBEREA MARGINELLA, Bates, Ann. Mag. Nat. Hist. (4) xii. (1873) p. 390.

Found also in Japan.

3. On some new Species of Coleoptera from Kiu-Kiang, China. By H. W. BATES, F.R.S.

[Received June 9, 1888.]

The following are descriptions of the new species of Cicindelidæ and Carabidæ contained in the first arrivals from Mr. Leech's collector (Mr. Pratt), who is now exploring, entomologically, the valley of the Yang-tsze-Kiang.

CICINDELA LOBIPENNIS.

C. ovipenni (Bates) *affinis*: *differt, inter alia, elytrorum humeris latius rotundatis, apice utrinque lobato-productis. Fusco-cuprea, opaca, labro virgulaque transversa elytrorum discoidali flavis, labro medio quadratim producto unidentato lateribus parum sinuato: capite thorace latiore inter oculos concavo longitudinaliter striato, occipite vermiculato-rugoso: thorace fere plano, quadrato, carina laterali verticaliter arcuata, toto vermiculato-strigoso: elytris elongato-ovatis, lateribus acute carinatis, epipleuris latis intus obliquatis paullo ante apicem terminatis ibique margine subito depresso, apice ipso producto, quasi lobato: palpis antennisque basi viridi-aneis. Prothoracis episterna undique undulato-rugosa. Corpus subtus obscure viridi-*